AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (previously presented): A data transmission system for at least one of remote maintenance and diagnosis of an automation system, which is provided with an electronic firewall, said system comprising:

a first transmit/receive device disposed at a location of a remote user which sends a first e-mail message, via a data transmission system, to the automation system, wherein the first transmit/receive device includes

an instruction encoder which packages at least one instruction in the first e-mail message; and

a second transmit/receive device disposed at a location of the automation system to receive the first e-mail message sent by the remote user, wherein the second transmit/receive device includes

an instruction decoder which automatically identifies the instruction in the first e-mail message, and which automatically transmits the instruction to an application of the automation system for which the instruction is intended.

2. (original): The system as claimed in claim 1, wherein the instruction sent by the first transmit/receive device is at least one of to control, operate and monitor the application of the automation system.

3. (original): The system as claimed in claim 1, wherein the application comprises a component apparatus of the automation system.

4. (original): The system as clamed in claim 1,

wherein the first e-mail message sent from the first transmit/receive device contains an instruction which is operative to generate result information in the application, and

wherein the second transmit/receive device transmits the result information in the form of a second e-mail message, in a reverse direction, to the first transmit/receive device of the remote user.

5. (original): The system as claimed in claim 1, wherein the second transmit/receive device is configured to receive result information generated by the application and send the result information in a second e-mail message to the first transmit/receive device of the remote user.

6. (original): The system as claimed in claim 5, wherein the second transmit/receive device further comprises an encryption device which encrypts the result information contained in the second e-mail sent by the second transmit/receive device to the first transmit/receive device; and

wherein the first transmit/receive device further comprises a decryption device which decrypts the result information contained in the second e-mail, at the location of the remote user.

7. (original): The system as claimed in claim 5, wherein the first e-mail and the second e-mail have, respectively, an identification field and a text field.

8. (original): The system as claimed in claim 7,

wherein the identification field includes an address field, a sender field, a date and time field, and a subject field; and

wherein the text field in the first e-mail includes the instruction which is to be transmitted to the application, and the text field in the second e-mail includes the result information sent to the first transmit/receive device.

9. (previously presented): A method for at least one of remote maintenance and diagnosis of an automation system, which is provided with an electronic firewall, the method comprising:

packaging at least one instruction in a first e-mail;

sending the first e-mail, by a remote user via a data transmission system;

receiving the first e-mail sent by the remote user at a location of the automation system;

identifying automatically, by the automation system, the instruction contained in the first e-mail; and

automatically forwarding the instruction to an intended application of the automation system for execution of the instruction.

10. (original): The method as claimed in claim 9, further comprising,

formatting the instruction of the first e-mail to be for at least one of controlling, monitoring and operating the application of the automation system.

11. (original): The method as claimed in claim 9, further comprising:

generating result information by the application based on the execution of the instruction in the first e-mail; and

sending the result information from the second transmit/receive device in the form of a second e-mail to the first transmit/receive device of the remote user.

12. (original): The method as claimed in claim 11, further comprising:

encrypting the result information sent by the second transmit/receive device to the first transmit/receive device; and

decrypting, at the location of the remote user, the result information received from the second transmit/receive device.

13. (previously presented): A data transmission system for at least one of remote maintenance and diagnosis of an automation system shielded by an electronic firewall, said system comprising:

first transmit/receive means disposed at a location of a remote user for sending a first e-mail message to the automation system, wherein the first transmit/receive means includes

instruction encoder means for packaging at least one instruction in the first e-mail message to be transmitted; and

second transmit/receive means disposed at a location of the automation system for receiving the first e-mail message sent by the remote user, wherein the second transmit/receive means includes

instruction decoder means for automatically identifying the instruction in the first e-mail message, and automatically transmitting the instruction to an application of the automation system for which the instruction is intended.

14. (original): The system as claimed in claim 13,

further comprising a result generating means for generating result information in the application, and

wherein said second transmit/receive means is further for transmitting the result information in the form of an e-mail message to the first transmit/receive means of the remote user.

15. (previously presented): A data transmission system for at least one of remote maintenance and diagnosis of an automation system that has at least one application and that is provided within an electronic firewall, said system comprising:

a first communication device disposed at a location outside the firewall and communicating with the automation system through at least one of a first e-mail message and a second e-mail message, wherein the first communication device comprises:

an instruction processor that at least either (a) packages at least one instruction for the application into the first e-mail message or (b) receives result information generated by the application in the second e-mail message; and

a second communication device disposed at a location inside the firewall and relaying at least one of the instruction and the result information between the first communication device and the automation system, wherein the second communication device comprises:

an instruction processor that at least either (a) receives the at least one instruction for the application in the first e-mail message and (b) automatically forwards the at least one instruction to the automation system, or (a) packages the result information generated by the application into the second e-mail message and (b) automatically transmits the result information in the second e-mail message.

16. (previously presented): A data transmission system for at least one of remote maintenance and diagnosis of an automation system, which is provided with an electronic firewall, said system comprising:

a first transmit/receive device disposed at a location of a remote user which sends a first e-mail message, via a data transmission system, to the automation system, wherein the first transmit/receive device includes

an instruction encoder which packages at least one instruction in the first e-mail message; and

a second transmit/receive device disposed at a location of the automation system to receive the first e-mail message sent by the remote user, wherein the second transmit/receive device includes

an instruction decoder which automatically identifies the instruction in the first e-mail message, and which automatically transmits the instruction to an application of the automation system for which the instruction is intended,

wherein the instruction sent by the first transmit/receive device is at least one of to control, operate and monitor the application of the automation system, and

wherein the second transmit/receive device is configured to receive result information generated by the application and send the result information in a second e-mail message to the first transmit/receive device of the remote user.

17. (previously presented): The system as claimed in claim 1, wherein the application of the automation system which receives the instruction is indicated in a subject field of the first e-mail message sent by the remote user.

18. (previously presented): The system as claimed in claim 1, wherein the second transmit/receive device is configured to receive result information generated by the application and automatically send the result information in a second e-mail message to the first transmit/receive device of the remote user.

19. (new): The system as claimed in claim 1, wherein the at least one of remote maintenance and diagnosis is automatically executed upon the second transmit/receive device receiving the first e-mail message.

20. (new): The method as claimed in claim 9, wherein the at least one of remote maintenance and diagnosis is automatically executed upon the receiving the first e-mail at the location of the automation system.

21. (new): The system as claimed in claim 13, wherein the at least one of remote maintenance and diagnosis is automatically executed upon the second transmit/receive means receiving the first e-mail message.

22. (new): The system as claimed in claim 16, wherein the at least one of remote maintenance and diagnosis is automatically executed upon the second transmit/receive device receiving the first e-mail message.